

CHAPTER 93. EVALUATE SECTION 135.411(a)(1) MANUAL/REVISION

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3302

B. Avionics: 5302

3. OBJECTIVE. This chapter provides guidance for evaluating an operator's/applicant's manual or revision to ensure that policies, procedures, and technical criteria meet regulatory requirements.

5. GENERAL.

A. The manual should enable the operator/applicant's maintenance and servicing personnel to carry out their duties at a high level of safety. The complexity of the manual will vary with the complexity of the operation. The manual must cover specific items in accordance with Title 14 of the Code of Federal Regulations (14 CFR), but may include additional items at the discretion of the applicant. A manual is therefore accepted rather than approved.

B. Manual acceptance can cause a delay in the certification process. If the operator/applicant does not have experienced and qualified personnel to prepare an acceptable manual, using a consultant may be appropriate. A consultant can be used in an advisory position only. After the review, the manual must be returned to the operator/applicant with a list of any discrepancies found. The operator/applicant must be informed that final certification will not be completed until discrepancies are corrected. Inspectors should be concerned primarily with ensuring regulatory compliance.

7. REVIEWING OPERATOR/APPLICANT'S MANUAL.

A. The manual is an administrative tool used to control and direct personnel. It should define all aspects of the maintenance operation.

(1) The policies and procedures section should address organizational matters.

(2) The maintenance section should address policies and procedures for administering the inspection and maintenance requirements, test flight requirements, and other subjects, as applicable.

B. The manual should include detailed instructions or specific references for accomplishing inspection and maintenance functions. It should also include forms, instructions, and references for recurring non-routine requirements, such as engine changes and inspections following abnormal occurrences (hard landings, lightning strikes, severe turbulence, high brake energy stops, etc.).

C. Manufacturers' technical manuals provide instructions for accomplishing specific tasks. These documents also establish methods, technical standards, measurements, and operational test procedures. The policy and procedures section of the operator's manual must describe areas of application for the pertinent technical documents.

D. The following is a list of examples of manual sections and titles:

- General policy and procedures
- Inspection procedures
- Maintenance procedures
- Training
- Wiring
- Parts
- Overhaul
- Structural repair
- Manufacturers or vendors
- Weight and balance control
- Servicing

E. Manuals should be easy to revise and show the date of last revision on each page. The manuals should have a page control system showing the number of pages and including the latest revision. The page

control system is usually identified as a list of effective pages.

F. The operator/applicant is responsible for ensuring that manuals present adequate guidance to

meet all regulatory requirements. The operator/applicant must understand and accept this responsibility early in the certification process.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of part 135
- Successful completion of the General/Air Carrier Airworthiness Safety Inspectors Indoctrination course, or equivalent

B. *Coordination.* This task requires close coordination with maintenance, avionics, and in some areas, operations inspectors.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- 14 CFR parts 43 and 91
- Title 49 of the Code of Federal Regulations (49 CFR) part 173
- FAA Order 8300.10, Airworthiness Inspector's Handbook

B. *Forms.* None.

C. *Job Aids.* None.

5. PROCEDURES.

A. *Brief Operator/Applicant.* Provide the operator/applicant with policies and regulatory requirements. Schedule and conduct a preliminary meeting, if necessary.

B. *Review Schedule of Events.* If this task is to be performed as part of an original certification, review the schedule of events to ensure that the task can be accomplished on schedule.

C. *Evaluate General Manual Requirements.* Ensure that the operator's/applicant's policies and procedures manual describes procedures, levels of authority, and information appropriate to part 135.

(1) The manual should include a description introducing its philosophy and goals. If the manual is in more than one volume, it should describe the division of contents between the volumes. The manual should also contain a list of effective dates.

(2) Manual revision and distribution procedures are required to provide current information to all

manual holders. The manual should include provisions to make it available to maintenance and ground personnel and to furnish a copy to the FAA certificate-holding district office (CHDO).

(3) Significant terms, acronyms, or abbreviations unique to the manual should be defined. Common industry terms do not need to be defined if the common meaning is intended. Terms clearly defined in the text don't need to be included.

(4) The manual should detail requirements to carry the appropriate parts of the manual on the aircraft, if applicable.

D. *Ensure that the Manual Contains Required Organizational Elements.* Check for the following:

(1) The names of all management personnel authorized to sign applicable operations specifications (OpSpecs) and act on behalf of the operator/applicant.

(2) Organizational charts for the following:

- Lines of authority
- Maintenance organization and support structure

(3) Job descriptions for all elements noted above.

(4) Procedures for and a description of a training program that ensures the following:

- All personnel, including inspection personnel, are fully informed of procedures and techniques currently in use
- All personnel are competent to perform their duties
- A method of documenting and retaining training records is established

(5) Procedures that would ensure that an adequate number of pages be retained in the aircraft maintenance logbook (or equivalent document). This would alert the flightcrews of any routine and non-routine maintenance performed since the last flight.

E. *Ensure that the Manual Contains Compliance Procedures.* Check for the following:

(1) Procedures to ensure compliance with aircraft weight and balance limitations.

(2) The operator's/applicant's OpSpecs, or appropriate extracted information (must retain identity as OpSpecs).

(3) Procedures, policies, instructions and controls for the use of the Minimum Equipment List (MEL) and Configuration Deviation List (CDL), if applicable.

F. Evaluate Manual Contents. The operator/applicant's manual must describe procedures and provide information appropriate to the applicable operating regulations. The following are required to be in the manual:

(1) *Manual Description.* Ensure that procedures for the following are clearly stated and meet the requirements of § 135.23(a). The manual must include the name of each management person authorized to act for the certificate holder, and list:

- The person's assigned area of responsibility
- The person's duties
- The person's responsibilities
- The person's authority
- Name and title of each person authorized to exercise operational control

(2) *Manual Revision and Distribution Procedures.* The operator's/applicant's manual should describe the revision control procedures and how the distribution of manuals will be controlled (Ref. § 135.21).

(a) Manuals should be easy to revise and have the date of the latest revision on each page. The manuals should have a page control system that shows the number of pages and ensures that the latest revision is included. The page control system is usually identified as a list of effective pages (Ref. § 135.23).

(b) Manuals should have a distribution system that meets the requirements of § 135.21, as appropriate.

(3) Any terms (definitions) in the manual that are unique to the operator's/applicant's operation should be defined.

(4) Duties and responsibilities of appropriate members of the ground organization personnel.

(5) Duties and responsibilities of management personnel, including the names and addresses of those required by § 135.23(a).

(6) Instructions and procedures for maintenance, preventive maintenance, and servicing.

(7) Time limitations or standards for determining time limitations for overhauls, inspections, and checks of airframes, engines, propellers, appliances, and emergency equipment.

(8) Procedures for aircraft refueling, eliminating fuel contamination, fire protection (including electrostatic protection), and supervising and protecting passengers during refueling (Ref. § 135.23(j)).

(9) Methods and procedures for maintaining the aircraft's weight and center of gravity (CG) within approved limits (Ref. § 135.23(b)).

(10) Copies of OpSpecs, parts D and E, if appropriate, that are normally included in the manual. The operator may decide, however, to insert pertinent excerpts of its OpSpecs or reference the OpSpecs in such a manner that they retain their identity (Ref. § 135.23(c)).

(11) Procedures for reporting and correcting mechanical irregularities, which address the following:

(a) Recording actions in the aircraft maintenance log (Ref. § 135.65).

(b) Ensuring the aircraft maintenance log is readily accessible to each flight crewmember (Ref. § 135.65).

(c) MEL (Ref. § 135.21 and 135.179).

(d) MEL's placard system.

(e) Deferred maintenance.

(f) Maintenance record entry requirements in the maintenance section of the manual.

(g) Providing a copy to the pilot-in-command (PIC).

(h) Providing a list of required maintenance-related forms and the requirements for preparation.

(i) Distributing required reports and forms (Ref. §§ 135.415 and 135.417).

(12) Test flight requirements and limitations, including the following:

- Items requiring test flight
- Procedures for performing test flight

(13) Ferry flight procedures, as appropriate.

(14) Procedures for the following:

(a) Reporting the occurrence or detection of each failure, malfunction, or defect of mechanical reliability (mechanical reliability reports).

(b) Reporting each interruption to a flight, unscheduled change of aircraft en route, or unscheduled stop or diversion from a route caused by known or suspected mechanical difficulties (Mechanical Interruption Summary Report).

(c) Submitting required aircraft and engine utilization reports to the CHDO, if required.

(d) Ensuring all major alteration reports are submitted to the CHDO.

(e) Ensuring reports of major repairs are prepared and retained by the operator.

(15) Other procedures, as appropriate, including the following:

- Parking aircraft in high winds
- Short-term storage
- Long-term storage
- Seasonal operation
- Removing ice and snow from aircraft
- Towing
- Emergency procedures

- Run-up/taxi personnel authorizations
- Aircraft ground run-up
- Taxiing aircraft
- Ramp signals and procedures
- Jacking, lifting, and hoisting
- Use of landing gear down locks
- Use of external gust locks
- Aircraft cleaning, including materials used for cleaning and flame-proofing materials after dry cleaning
- Engine change
- Propeller change
- Cylinder change
- Engine and propeller overspeed
- High oil consumption
- Oil leaks
- Engine and propeller troubleshooting
- Oxygen and nitrogen servicing and storage

G. Analyze Results. Upon completion of review, analyze the results and determine whether the operator/applicant's manual meets all requirements.

H. Debrief Operator/Applicant. Discuss discrepancies and advise the operator/applicant on what areas need corrective action.

7. TASK OUTCOMES.

A. File PTRS Data Sheet.

B. Document Task. File all supporting paperwork in the operator/applicant's office file.

9. FUTURE ACTIVITIES. Normal surveillance.